

VALENCE ELECTRONS

Name _____

Valence electrons are the electrons in the outermost principal energy level. They are always "s" or "s and p" electrons. Since the total number of electrons possible in s and p sublevels is eight, there can be no more than eight valence electrons.

Determine the number of valence electrons in the atoms below.

Example: carbon

Electron configuration is $1s^2$ $2s^2 2p^2$.

Carbon has 4 valence electrons.

1. fluorine _____

11. lithium _____

2. phosphorus _____

12. zinc _____

3. calcium _____

13. carbon _____

4. nitrogen _____

14. iodine _____

5. iron _____

15. oxygen _____

6. argon _____

16. barium _____

7. potassium _____

17. aluminum _____

8. helium _____

18. hydrogen _____

9. magnesium _____

19. xenon _____

10. sulfur _____

20. copper _____

LEWIS DOT DIAGRAMS

Name _____

Lewis diagrams are a way to indicate the number of valence electrons around an atom

Na^{\cdot} , $\cdot\ddot{\text{Cl}}\cdot$, $\cdot\ddot{\text{N}}\cdot$
are all examples of
this type of diagram.

Draw Lewis dot diagrams of the following atoms.

1. calcium

6. carbon

2. potassium

7. helium

3. argon

8. oxygen

4. aluminum

9. phosphorus

5. bromine

10. hydrogen